Wastewater Treatment Process

INORGANIC PROCESS

1. Customer generated waste water received by tank truck or rail car unloaded into Influent Equilization Tanks # 1 or 2.

2. Wastewater is then pumped from the selected EQ Tank to the DAF Mix Tank.

3. Mix Tank.

   a. pH maintained at 7.0 s.u.

   b. pH adjusted through addition of sulfuric acid (H_2SO_4) and caustic (NaOH.)

   c. Aluminum Sulfate added to create pin-floc.

   d. Water is agitated to mix.

   e. Anionic Polymer is injected inline.

4. The flow is directed to a DAF for solids removal.

5. From the DAF the flow is directed to Neutralization Tank # 1 for further pH adjustments and chemical addition if necessary.

6. From Neutralization Tank # 1 the flow is directed to Neutralization Tank # 2 for precipitation.

7. From Neutralization Tank # 2 the flow is gravity fed to the Lamella Clarifier.

8. From the Lamella Clarifier the flow is gravity fed to the tube-settling unit.

9. From the tube-settling unit the flow is directed to the final clarification tank.

10. The flow is then directed through a 2 inch Neptune flow meter.

11. The flow is then directed into the catch basin and is discharged to East Chicago Sanitary District city sewer.

ORGANIC PROCESS

1. Customer generated waste water received by tank truck or rail car unloaded into API Oil Separator.

2. Oils removed in this process flow into the Separated Oil Storage Tank and then are pumped to Oily Waste Storage (recycle) storage tank # 1060.

3. The API Oil Separator effluent is gravity fed to the API effluent tank and then pumped to influent Equalization tanks # 1 or 2.

4. Inorganic process from this point.

FLOW

Wastewater treatment plant effluent is approximately 35,000 GPD (average) as of the date on this flow process. (According to the aforementioned flow meter).

OPERATION HOURS

Truck Wash and Rail Wash operate 24 hours on weekdays, 7:00 AM to 3:30 PM on Saturday, closed on Sunday.

Average daily volume is 25 to 45 tank trucks and 3 to 10 rail cars.

CHEMICAL SUPPLIERS

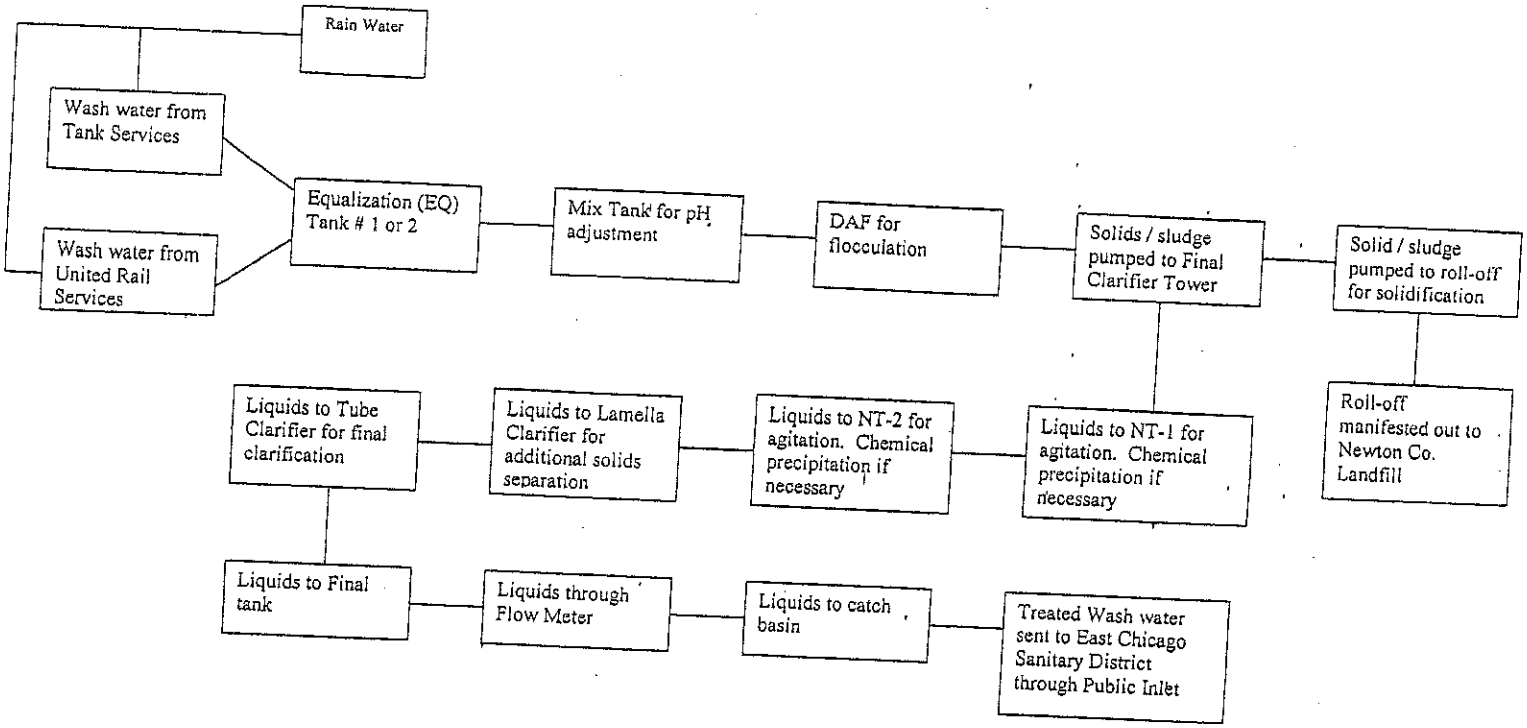
Clear Water Technologies Group Inc.
11426 South Perry Ave.
Chicago, IL. 60628
PH. 773-821-6765

Alexander Chemical Co.
1909 Butterfield Rd. Suite 120
Downers Grove, IL. 60515
PH. 630-955-6050

Acid Products Co. Inc.
600 West 41st Street
Chicago,IL. 60609
PH. 773-254-5222

KA Steel Chemicals Inc.
15185 Main Street
Lamont IL. 60439

Tank Name	Volume (ft3)	Capacity (gallons)	Tank Dimensions		
			W	D	H / L
API Effluent Tank	180	1346	6'	8'	2.5'
			6'	8'	5'
API Tank	2300	17204	26 '	9'	9.5'
			2'	9'	4'
Caustic Storage Tank	200	1500	5'		10'
DAF Effluent Tank	150	1050	7'		4'
Dissolved Air Floatation Tank	156	1166	3'	4'	13'
EQ # 1	4474.5	33469		10'	57'
EQ # 2	4474.5	33469		10'	57'
Final Clarification Tank (Sludge Tower)	4239	31707	13' Cone 8'		31'
Final Tank	216	1616	4'	6'	10'/F 8'/W
Lamella Clarifier (Model 570 / 55)	455	3455	5'	6'	14'
Liquid Aluminum Sulfate Storage Tank	267	2000	7'		6'
DAF Influent Tank	118	880	5'		6'
Oily Waste Storage	1337	10000		9'	55'
Phos. Tube Unit	240	1795	8'	6'	5'
			4'	6'	3'
			4'	6'	3'
Primary Neutralization Tank	215.5	1612	6.5 4.5' Cone		5'
Rail Wash Collection Pit	160	1197	10'	4'	4'
Secondary Neutralization and Precipitation Pit	331	2447	7.5'		7.5'
Truck Wash Collection Pit	232.5	1739	23'	2.5'	3'
			5'	4'	3'
Tube Unit Effluent Tank	114	850	5.5'		5'
Tube Unit Influent Tank	114	850	5.5'		5'



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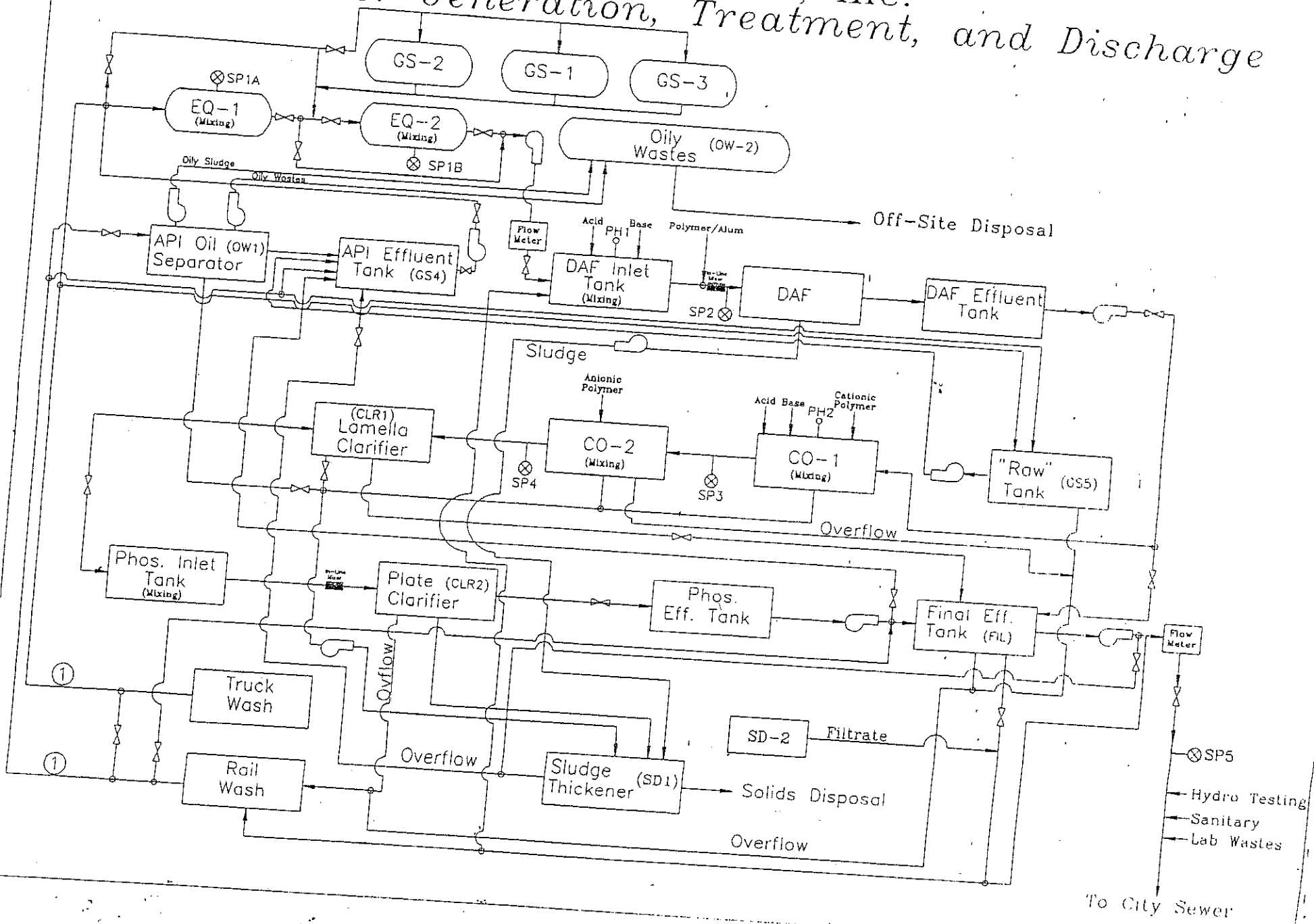
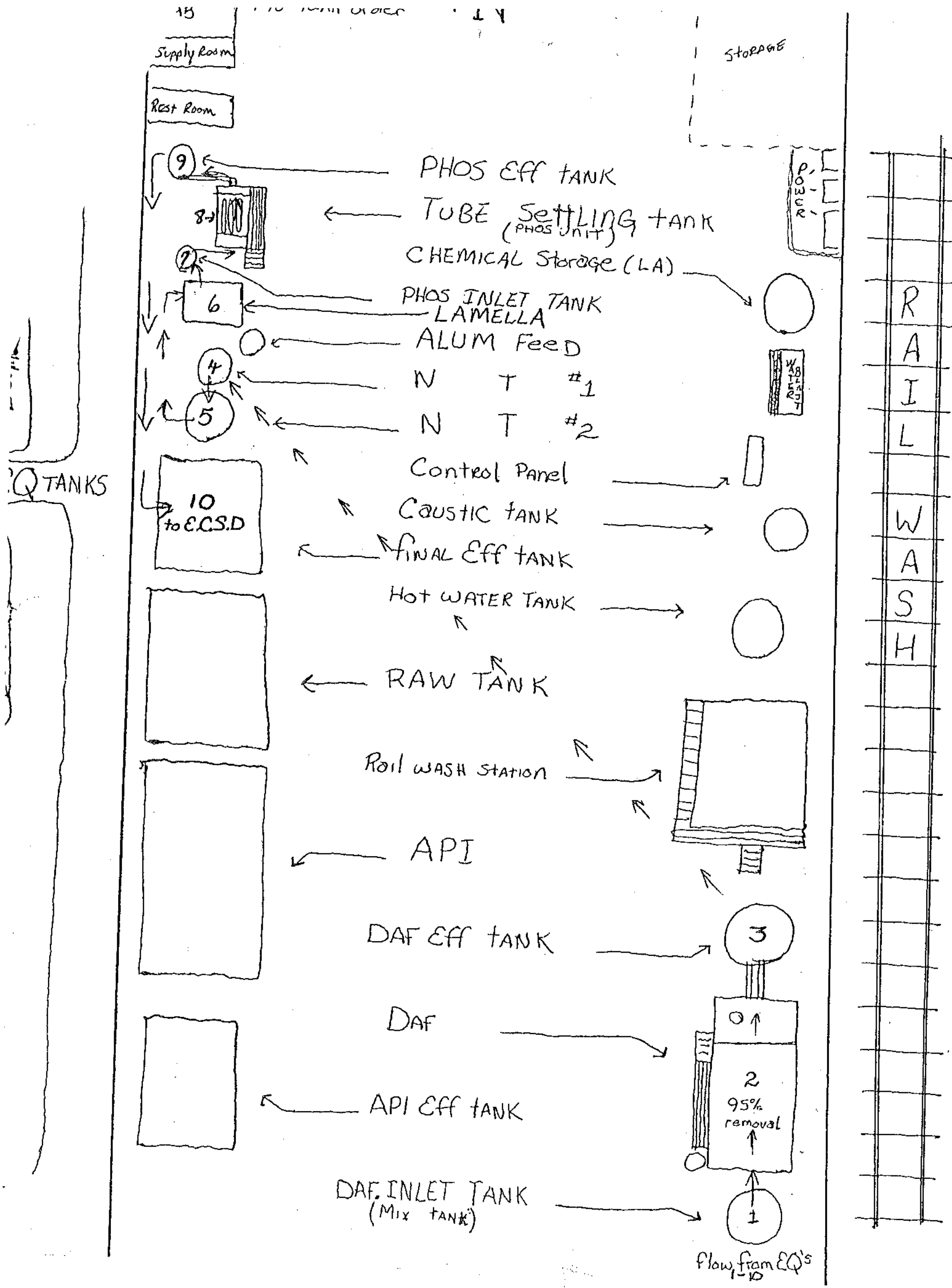
UNITED RAIL SERVICE, Inc.
Tank Service, Inc.
Wastewater Generation, Treatment, and Discharge




Supply Room
Rest Room
STORAGE
POWER
PHOS Eff tANK
TUBE Settling tank
(PHOS UNIT)
CHEMICAL Storage (LA)
PHOS INLET TANK
LAMELLA
ALUM Feed
N T #1
N T #2
Control Panel
Caustic tank
final Eff tank
Hot WATER TANK
RAW TANK
Rail WASH Station
API
DAF Eff tANK
DAF
API Eff tANK
DAF INLET TANK
(Mix tank)
Flow from EQ's 1-10
10 to E.C.S.D
2 95% removal
WASH WATER
EQ TANKS
RAIL WASH
9
8
7
6
4
5
3
1